

ABoVE Leadership Telecon – 4/2/13

Attendees: Diane W., Dan H., Eric K., Peter G., Libby L.; Note taker: Liz H.

The ABoVE leadership telecon included a discussion of current business followed by a discussion of the “boundaries” to be placed on the SDT when crafting the experiment plan. The group discussed the flexibilities, constraints and the most pressing issues for the SDT to address based on the ABoVE Workshop Report. Six “big issues” were identified. Additionally, modeling strategies within ABoVE were discussed.

Boundaries Discussions “Big Issues”

1. Scaling focus of the ABoVE campaign (global climate vs regional impacts) – Is the focus on the feedbacks to global climate or is this a regional impact vulnerability study?
 - a. At the workshop there were differing views on the proper weighting between studying the feedbacks to global climate vs regional impacts. This should be addressed early in the SDT planning process.
2. Geographic scope and focus – Many consider the study region to be limited to Alaska and western Canada, but is there a need for the SDT to further discuss these boundaries?
3. Disciplinary themes are clearly stated in original white paper, but absent from workshop report – Is there a need to revisit these themes and/or for an overarching theme?
 - a. The executive summary implicitly includes these themes.
 - b. A push was made not to compartmentalize the research into themes too soon.
4. Resilience and vulnerability as scientific research areas – These words have a deeper meaning than what is currently included in the ABoVE reports.
 - a. There is a community of researchers studying the concepts of resilience and vulnerability, however the ABoVE reports do not go into this level of detail. Will this type of research be included in ABoVE or connected to ABoVE in some way (considering vulnerability is in the name of the campaign)?
5. Outside constraints and boundaries – To what extent should the boundaries/constraints identified in other policy documents be incorporated into the ABoVE research plan?
 - a. Policy documents should be identified and reviewed for possible constraints/boundaries; one example is the IARPC’s Arctic Research Plan
6. Societal issues science within ABoVE – What role should societal issues play in the ABoVE research plan?
 - a. Determining answers to issues #1 and #2 could answer this question
 - b. What role does the social science community play in ABoVE research?

Modeling Strategies Discussion

The group discussed the different modeling strategies that could be included in ABoVE. Much of the time was spent discussing the potential interdependencies between ABoVE modeling efforts and the NGEE project. NGEE may be able to provide ABoVE with a better understanding of permafrost dynamics, and ABoVE could possibly provide NGEE with additional modeling based on remote sensing information.

Modeling strategies notes:

Should a single community model be used in ABoVE?

- NGEE is headed in this direction over longer time frames to coordinate with the DOE CLM model
- Where NGEE is more centrally managed, ABoVE will be driven by individual research proposals
- A framework could be used where models of different processes in the Arctic are linked in some fashion such that products from one model could be an input in another model
 - Should ABoVE find a way to link models, or should a new model be created?
 - Some modelers have suggested that it is easier to build a new model than adapt current models
 - Rather than discuss a modeling framework, we should focus on a “modeling strategy”
 - A model comparison should be a first step in ABoVE as there are many arctic models, but ABoVE should not be a modeling campaign only (Diane)

Some have asked if NGEE could do the modeling needed for ABoVE. However this would not work as NGEE has some constraints that ABoVE does not:

- NGEE is focused on climate predictions and only the bedrock through the canopy layer are being considered (other regions are not included, such as atmosphere, wildlife, etc.)
- Research time-frames may be different between the two campaigns
- ABoVE modeling will be driven by remote sensing
- NGEE and ABoVE modeling efforts could be complementary
 - NGEE might fill in current gaps in the understanding of permafrost which could be useful to ABoVE, however this information would need to be scaled throughout the region (scaling methods still being discussed by NGEE)
 - NGEE may provide new process understanding which ABoVE could utilize
 - The remote sensing that ABoVE will undoubtedly use could be helpful to NGEE
 - It would be helpful to have a better understanding of where NGEE and ABoVE could interact